REMARKS

In traverse of the pending restriction requirement, Applicants respectfully submit the following remarks.

The Examiner has argued that the inventions listed as Groups II-VI and VIII do not relate to a single general inventive concept, stating that the groups lack the same or corresponding special technical features because Groups II-VI and VIII are directed to different methods which have different method steps and different outcomes and do not require the same special technical features.

Applicants respectfully submit that a search for the method of Group V (Claims 42-57), would necessarily include the methods of Group VI (Claims 58-71). Claim 42 and Claim 58 are presented below, with the corresponding limitations shown in bold.

42. A protein profiling method of detecting multiple Lysosomal Storage Disease ("LSD") target antigens in a sample, the protein profiling method comprising:

a) **exposing a pooled population of target capture microspheres to the sample, the target capture microspheres having distinct subsets, and each distinct subset having: (i) one or more characteristic classification parameters that distinguishes one target capture microsphere of one subset from those of another target capture microsphere subset according to a predetermined discriminate microsphere function table, which includes fluorescence emission intensities; and (ii) a distinct capture antibody that can bind a specific subset of LSD antigens;**

b) **passing the exposed pooled population of target capture microspheres having distinct subsets through an examination zone; and**

c) **determining an identity and quantity of each specific subset of LSD target antigen of interest, if present, in the sample by (i) collecting data relating to one or more subsets of target capture microsphere classification parameters that distinguishes one target capture antibody microsphere of one subset from those of another target capture antibody microsphere subset according to a predetermined discriminate function table, including the fluorescence emission intensities, (ii) collecting data relating to the presence or absence of a corresponding subset of specific LSD antigen, (iii) quantifying each corresponding subset of specific LSD antigen on each subset of capture antibody microsphere.**

58. A protein profiling method of screening for lysosomal storage disorder ("LSD") in a target biological sample, the protein profiling method comprising:

a) **exposing a pooled population of target capture microspheres to the target biological sample, the target capture microspheres having distinct subsets, and each distinct subset having: (i) one or more characteristic classification parameters that distinguishes one target capture microsphere of one subset from those of another target capture microsphere subset according to a predetermined discriminate microsphere function table; and (ii) a distinct capture antibody that can bind a specific subset of LSD antigens;**

b) adding a pooled population of detection antibodies to the exposed pooled population of the target capture microspheres, the pooled population of target detection antibodies having distinct subsets that correspond to and bind to the same specific subset of LSD antigens coupled to each distinct subset of the target capture microspheres, forming an exposed pooled population of target capture microsphere complexes having distinct subsets;

c) **passing the an exposed pooled population of target capture microsphere complexes having distinct subsets through an examination zone;**

d) **determining the identity and quantity of each specific subset of LSD target antigen of interest, if present, in the sample by (i) collecting data relating to one or more subsets of target capture microsphere classification parameters that distinguishes one target capture antibody microsphere of one subset from those of another target capture antibody microsphere subset according to a predetermined discriminate function table, including the fluorescence emission intensities, (ii) collecting data relating to the presence or absence of a corresponding detection antibody that binds the subset of specific LSD antigen, (iii) quantifying each corresponding detection antibody on each subset of capture antibody microsphere**; and

e) comparing the identity and quantity of each specific subset of LSD target antigen of interest from the sample obtained from a patient having an unknown LSD clinical status to the identity and quantity of the same specific subset of LSD target antigen of interest from the sample obtained from a patient having a known LSD clinical status.

Similarly, a search for the method of Group V (Claims 42-57) would also necessarily include the methods of Group VIII (Claim 73). Claim 73 is presented below, with the limitations corresponding to Claim 42 shown in bold.

73. A protein profiling method of screening for lysosomal storage disorder ("LSD") in a target biological sample, the protein profiling method comprising:

a) **exposing a pooled population of target capture microspheres to the target biological sample, the target capture microspheres having distinct subsets, and each distinct subset having: (i) one or more characteristic classification parameters that distinguishes one target capture microsphere of one subset from those of another target capture microsphere subset according to a predetermined discriminate microsphere function table; and (ii) a distinct capture antibody that can bind a specific subset of LSD antigens**; wherein, the pooled population of target capture microspheres comprises: a first microsphere conjugated to a first capture antibody capable of binding α-iduronidase; a second microsphere conjugated to a second capture antibody capable of binding α-glucosidase; a third microsphere conjugated to a third capture antibody capable of binding saposin C; a fourth microsphere conjugated to a fourth capture antibody capable of binding LAMP-1;

b) adding a pooled population of detection antibodies to the exposed pooled population of the target capture microspheres, the pooled population of target detection antibodies having distinct subsets that correspond to and bind to the same specific subset of LSD antigens coupled to each distinct subset of the target capture microspheres, forming an exposed pooled population of target capture microsphere complexes having distinct subsets, wherein the pooled population of detection antibodies comprises: a first detection antibody conjugated to a fluorescent detection label and capable of binding α-iduronidase; a second detection antibody conjugated to a fluorescent detection label and capable of binding α-glucosidase; a third detection antibody conjugated to a fluorescent detection label and capable of binding saposin C; a second detection antibody conjugated to a fluorescent detection label and capable of binding LAMP-1;

c) **passing the an exposed pooled population of target capture microsphere complexes having distinct subsets through an examination zone;**

d) **determining the identity and quantity of each specific subset of LSD target antigen of interest, if present, in the sample by (i) collecting fluorescent data relating to one or more subsets of target capture microsphere classification parameters that distinguishes one target capture antibody microsphere of one subset from those of another target capture antibody microsphere subset according to a predetermined discriminate function table, including the fluorescence emission intensities, (ii) collecting data relating to the presence or absence of a corresponding detection antibody that binds the subset of specific LSD antigen, (iii) quantifying each corresponding detection antibody on each subset of capture antibody microsphere;** and

e) comparing the identity and quantity of each specific subset of LSD target antigen of interest from the sample obtained from a patient having an unknown LSD clinical

status to the identity and quantity of the same specific subset of LSD target antigen of interest from the sample obtained from a patient having a known LSD clinical status;

wherein; the LSD is Fabry; Mucopolysaccharidosis type I ("MPS I"); Mucopolysaccharidosis type II ("MPS-II"); Mucopolysaccharidosis type III ("MCPS-III"); Mucopolysaccharidosis type IV ("MPS-IV"); or Glycogen storage disease II ("Pompe"); the sample is selected from a cellular extract, blood, plasma, or urine, the microspheres have a diameter of about 5μm; the target capture microspheres of one subset differ from the target capture microspheres of another subset in an intensity of at least one fluorescence emission classification parameter; the quantity of each specific subset of LSD target antigen of interest is proportional another specific subset of LSD target antigen of interest; and the results of said protein profiling method are displayed in real time.

Therefore, the search for Group V would include the elements of a search for Groups VI and VIII. For all of these reasons, Applicants respectfully assert that the restriction requirement is inappropriate and request that the application proceed to further examination with the simultaneous election of **Groups V, VI, and VIII (Claims 42-71, and 73)**.

If the Examiner has any questions which pertain to this Application or this response, the Examiner is encouraged to contact the undersigned to resolve these matters where possible.

Respectfully Submitted,

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